

**ABSTRACT OF THE DISCLOSURE**

A method and system for examining tissue in order to differentiate it from other tissue according to the dielectric properties of the examined tissue, by: applying a probe to the tissue to be examined, such that the probe generates an electrical fringe field in the zone of the examined tissue and produces a reflected pulse therefrom with negligible radiation penetrating into the tissue itself; detecting the reflected electrical pulse; and comparing electrical characteristics of the reflected electrical pulse with respect to the applied electrical pulse to provide an indication of the dielectric properties of the examined tissue.

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